

LISTING OF THE CLAIMS

The following listing, if entered, replaces all prior versions of the claims in the present application.

1. (Previously Presented) A method comprising:
transmitting a first data stream to a switch fabric, said first data stream having a first priority; and
at any time during said transmission, interrupting said transmission of said first data stream to transmit a second data stream to said switch fabric, said second data stream having a second priority;
at any time during transmission of said second data stream, interrupting said transmission of said second data stream to resume transmission of said first data stream to the switching fabric.
2. (Previously Presented) The method of claim 1, further comprising:
resuming transmission of said first data stream even though there is data of the second data stream to transmit to the switching fabric.
3. (Previously Presented) The method of claim 1, further comprising:
stopping said transmission of said first data stream;
transmitting a first switch code; and
transmitting said second data stream.
4. (Previously Presented) The method of claim 3, further comprising:
transmitting a second switch code; and
resuming transmission of said first data stream.
5. (Original) The method of claim 1, wherein
said first priority is a low priority; and
said second priority is a high priority.

6. (Original) The method of claim 1, further comprising :
stopping transmission of a frame of said first data stream after detection of a start
of frame and prior to detection of an end of frame.
- 7-8. Cancelled
9. (Original) The method of claim 1, further comprising:
storing data of said first data stream in a first FIFO; and
storing data of said second data stream in a second FIFO.
10. (Previously Presented) The method of claim 9, wherein said interrupting of
transmission of the first data stream comprises:
upon detection of data in said second FIFO, interrupting said first data stream.
11. (Original) The method of claim 9, further comprising:
receiving a data stream at a line card, said data stream comprising frames of said
first data stream and frames of said second data stream; and
detecting the priority of said frames of said data stream.
12. (Previously Presented) The method of claim 1 wherein transmission of the
second data stream is interrupted to transmit a predetermined amount of bytes of
data of said first data stream.
13. (Previously Presented) An apparatus comprising:
a first buffer configured to store data of a first data stream prior to transmission to
a switching fabric, said data of said first data stream having a first priority;
a second buffer configured to store data of a second data stream prior to
transmission to the switching fabric, said data of said second data stream
having a second priority;
a priority switch circuit coupled to said first buffer and said second buffer,
wherein said priority switch circuit is configured to upon detection of data
of said second data stream, interrupt a transmission of data of said first

data stream from the first buffer at any time during said transmission and transmit data of said second data stream from the second buffer, and wherein said priority switch circuit is further configured to interrupt said transmission of said second data stream from the second buffer, at any time during said transmission of said second data stream, to resume transmission of said first data stream from the first buffer.

14. (Previously Presented) The apparatus of claim 13, wherein said priority switch circuit is configured to resume transmission of said first data stream even though the second buffer contains data of the second data stream to be transmitted.
15. (Previously Presented) The apparatus of claim 14, wherein said priority switch circuit is further configured to transmit a first switch code after the second buffer has transmitted data of said second data stream and prior to resuming the transmission of data of said first data stream.
16. (Previously Presented) The apparatus of claim 13, wherein said priority switch circuit is configured to transmit a second switch code upon detection of data of said second data stream in the second buffer.
17. (Original) The apparatus of claim 13 wherein said priority switch circuit is further configured to interrupt transmission of said first data stream during transmission of a packet of said first data stream from said first buffer.
18. (Previously Presented) The apparatus of claim 13 wherein said priority switch circuit is further configured to transmit a predetermined amount of bytes from said first buffer when the priority switch circuit resumes transmission of the first data stream.
19. (Original) The apparatus of claim 13 further comprising:
a port coupleable to a network device; and

a forwarding engine coupled between said port and each of said first and second buffers, said forwarding engine configured to forward frames of said first data stream to said first buffer and forward second frames of said second data stream to said second buffer.

20. (Previously Presented) The apparatus of claim 13 further comprising:
a serial link configured to serialize data received from said first and said second buffers and said priority switch circuit and transmit said serialized data to the switching fabric.

21-22. Cancelled

23. (Previously Presented) An apparatus comprising:
a first buffer configured to store data of a first data stream prior to transmission to a switching fabric, said data of said first data stream having a first priority;
a second buffer configured to store data of a second data stream prior to transmission to the switching fabric, said data of said second data stream having a second priority; and
means for, upon detection of data in said second buffer, interrupting a transmission of said first data stream from the first buffer at any time and transmitting said second data stream to the switch fabric from the second buffer;
means for resuming transmission of said first data stream when there is data in the second buffer to transmit, wherein the resuming transmission comprises interrupting, at any time, transmission of said second data stream.

24-28. Cancelled

29. (Previously Presented) A method comprising:
transmitting a first data stream to a switch fabric, said first data stream having a first priority;

- at any time during said transmission, interrupting said transmission of said first data stream;
- transmitting a first switch code;
- transmitting a second data stream to said switch fabric, said second data stream having a second priority;
- transmitting a second switch code; and
- resuming transmission of said first data stream, wherein
- the first switch code comprises at least one of an indication that the data following the first switch code has a different priority than the data preceding the first switch code and that the data preceding the first switch code is the last data of a frame, and
- the second switch code comprises at least one of an indication that the data following the second switch code has a different priority than the data preceding the second switch code and that the data preceding the second switch code is the last data of a frame.
30. (Previously Presented) An apparatus comprising:
- a first buffer configured to store data of a first data stream prior to transmission to a switching fabric, said data of said first data stream having a first priority, wherein said switching fabric is comprised of a first crossbar, wherein said first crossbar is configured to receive said first data stream;
 - a second buffer configured to store data of a second data stream prior to transmission to said switching fabric, said data of said second data stream having a second priority, wherein said switching fabric is comprised of a second crossbar, wherein said second crossbar is configured to receive said second data stream; and
 - a priority switch circuit coupled to said first buffer and said second buffer, wherein
- said priority switch circuit is configured to, upon detection of data of said second data stream, interrupt a transmission of data of said first data stream from the first buffer at any time during said

transmission and transmit data of said second data stream from the second buffer, and
said priority switch circuit is further configured to interrupt, at any time, transmission of said second data stream to resume transmission of said first data stream.

31. (Previously Presented) The method of claim 30 wherein said priority switch circuit is further configured to interrupt said transmission of said second data stream from the second buffer to resume transmission of said first data stream from the first buffer.
32. (Previously Presented) The method of claim 9 wherein the first and second FIFOs are implemented as circular FIFOs, the first and second FIFOs are implemented in a single memory, and a boundary between the first and second FIFOs is set by a pointer.
33. (Previously Presented) The method of claim 1, further comprising: stopping transmission of a frame of said second data stream after detection of a start of said frame and prior to detection of an end of said frame.
34. (Previously Presented) The method of claim 1, further comprising: counting bytes of the second data stream; wherein the second data stream is interrupted when the counted bytes of the second stream reaches a predetermined number.
35. (Previously Presented) The method of claim 1, wherein the second data stream is interrupted after a certain time period elapses without transmission of data of the second data stream.
36. (Previously Presented) The apparatus of claim 13, further comprising counting bytes of the second data stream, wherein

the second data stream interrupted when the counted bytes of the second stream reaches a predetermined number.

37. (Previously Presented) The method of claim 13, wherein the second data stream is interrupted after a certain time period elapses without transmission of data of the second data stream.
38. (Previously Presented) The apparatus of claim 23, further comprising counting bytes of the second data stream, wherein the second data stream interrupted when the counted bytes of the second stream reaches a predetermined number.
39. (Previously Presented) The apparatus of claim 23, wherein the second data stream is interrupted after a certain time period elapses without transmission of data of the second data stream.